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of the small mirror. The loss of light would, of course, be the same as in the Newtonian.

The large discs of glass that can be made into mirrors are difficult to obtain, as there seems to be a limit that the makers can deal with at one melting. I suggested some time since to one or two glass makers that it would be possible to build up the discs by having a top and bottom disc of a moderate thickness, say for an 8-foot disc of about 2″ thick, separating these discs by a series of, say, four or five cross strips of glass of a similar thickness, not quite touching, placed crossing each other; then by using a powder of an easily fusible glass, fluxing the whole together in the annealing furnace. This seems to be worth trying, though I cannot say whether it would succeed. I offer the suggestion, as it could be tried by using a thickness of glass that the manufacturers seem to be able to produce easily.

1890 *May* 6.

Observations of Mimas, 1890. By A. A. Common, F.R.S.

On the few occasions when the weather has permitted observation, *Mimas* has been looked for with the 5-foot reflector. The following observations were made :—

	d	h	m	
1890 March	17	12	30	*Mimas* just well past W. elongation.
		12	37	Well past.
		12	45	,, ,,
April	20	9	30	*Mimas* coming up to W. elongation.
		10	10	At W. elongation.
	29	10	30	*Mimas* in conjunction with E. end of ring; observation difficult, definition bad. (A. Taylor.)

Observations of the Planets Victoria and Sappho, made with the Cambridge Transit Circle in the Year 1889.

(*Communicated by Prof. J. C. Adams.*)

Victoria.

Date of Obs. 1889.	True Apparent R.A.	True Apparent N.P.D.	Date of Obs. 1889.	True Apparent R.A.	True Apparent N.P.D.
	h m s	° ′ ″		h m s	° ′ ″
June 25	19 59 11·66	96 38 58·67	July 30	19 32 47·58	94 41 2·98
26	19 58 40·32	96 31 26·34	Aug. 3	19 30 12·94	94 47 1·15
27	19 58 7·25	96 24 8·77	5	19 29 5·25	94 51 12·14
July 5	19 52 49·19	95 33 38·07	6	19 28 34·09	94 53 34·07
11	19 48 5·69	95 6 3·99	15	19 25 17·99	95 21 47·04
18	19 42 13·50	94 45 51·51	17	19 24 56·87	95 29 26·01
23	19 38 4·71	94 39 23·73	29	19 25 54·51	96 20 51·07

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Sappho.

Date of Obs. 1889.	True Apparent R.A.	True Apparent N.P.D.	Date of Obs. 1889.	True Apparent R.A.	True Apparent N.P.D.
	h m s	° ′ ″		h m s	° ′ ″
Sept. 10	1 11 25·45	72 7 31·78	Oct. 9	0 55 29·18	76 43 9·62
16	1 9 34·97	72 43 0·59	10	0 54 47·30	76 56 2·81
17	1 9 10·38	72 50 13·58	12	0 53 24·71	77 22 6·24
20	1 7 46·89	73 13 50·42	14	0 52 4·47	77 48 17·10
25	1 4 59·62	73 59 52·97	21	0 47 50·66	79 19 29·02
Oct. 3	0 59 42·22	75 28 20·63	24	0 46 19·71	79 57 16·93
7	0 56 53·28	76 17 40·15	25	0 45 52·15	80 9 34·61
8	0 56 11·10	76 30 21·46	31	0 43 42·17	81 19 19·43

N.B.—The above planets' places are not corrected either for aberration or parallax.

Mean Right Ascensions and Mean North Polar Distances for January 1, 1889, *of Comparison Stars with the Planet Victoria. Observed with the Cambridge Transit Circle.*

Reference Number of Star.	D.M.	Number of Obs.	Mean R.A. Jan. 1, 1889.	Mean N.P.D. Jan. 1, 1889.
	°		h m s	° ′ ″
1	−6–5151	3	19 21 25·30	95 57 22·24
2	−6–5158	3	19 23 2·68	96 24 2·15
3	−5–4985	3	19 24 6·30	95 9 7·97
4	−5–4989	4	19 25 17·96	95 54 13·74
5	−5–4992	5	19 25 40·41	95 21 3·88
6	−5–5006	5	19 27 50·56	94 58 50·71
7	−4–4843	3	19 28 37·76	94 41 25·08
8	−4–4846	3	19 29 20·70	94 33 6·70
9	−5–5021	3	19 30 41·23	95 1 3·72
10.	−4–4855	3	19 30 53·49	94 32 44·86
11	−3–4649	2	19 31 22·06	93 43 19·99
12	−4–4861	4	19 31 54·02	94 53 41·71
13	−5–5036	3	19 34 26·95	95 42 8·41
14	−4–4877	5	19 34 53·56	94 17 22·63
15	−4–4883	7	19 35 56·07	94 32 51·00
16	−4–4903	4	19 39 23·76	94 47 23·88
17	−4–4916	5	19 40 59·51	93 56 1·74
18	−5–5060	2	19 41 53·43	95 30 24·59
19	−4–4926	8	19 43 4·53	94 46 19·44
20	−4–4936	2	19 43 44·00	94 48 25·93
21	−5–5075	2	19 44 56·11	94 58 28·26
22	−4–4960	4	19 47 27·31	94 51 33·76

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Reference Number of Star.	D.M.	Number of Obs.	Mean R.A. Jan. 1, 1889.	Mean N.P.D. Jan. 1, 1889.
	°		h m s	° ′ ″
23	−5–5099	4	19 48 22·41	95 20 1·33
24	−5–5120	4	19 51 25·88	94 58 55·54
25	−5–5124	4	19 52 3·61	95 29 2·07
26	−6–5320	4	19 52 18·20	96 38 57·47
27	−4–4984	2	19 52 38·11	94 39 18·45
28	−4–4992	3	19 54 57·35	94 36 53·66
29	−6–5339	3	19 55 39·86	96 40 50·12
30	−5–5138	3	19 56 17·67	95 17 50·29
31	−8–5205	3	19 57 4·81	98 0 14·76
32	−5–5144	3	19 57 21·75	94 56 29·82
33	−6–5360	4	19 59 23·84	96 53 58·41
34	−4–5016	2	20 0 44·92	94 44 5·62
35	−7–5169	5	20 0 46·73	97 19 56·40
36	−8–5237	2	20 1 3·74	98 30 0·13
37	−9–5382	7	20 5 8·99	99 10 12·87

Observations of Stars as Culminators.

	−8–4887	20	19 6 39·46	98 7 27·71
	−5–4936	20	19 14 37·34	95 37 22·16
	−6–5451	9	20 14 31·50	96 42 29·36
	−3–4888	8	20 19 55·09	93 9 36·40

Mean Right Ascensions and Mean North Polar Distances for January 1, 1889, *of Comparison Stars with the Planet Sappho. Observed with the Cambridge Transit Circle.*

Reference Number of Star.	D.M.	Number of Obs.	Mean R.A. Jan. 1, 1889.	Mean N.P.D. Jan. 1, 1889.
	°		h m s	° ′ ″
	+ 8–101	1	0 37 16·297	81 35 28·90
	+ 7–104	1	0 39 55·566	82 45 45·00
1	+ 8–110	4	0 42 25·234	81 23 2·60
2	+ 9–090	2	0 42 31·14	80 20 50·06
3	+11–102	3	0 44 24·38	78 46 24·18
4	+ 9–097	6	0 44 46·70	80 11 35·64
5	+11–106	3	0 45 46·15	77 49 7·08
6	+ 9–099	2	0 46 20·45	80 0 7·38
7	+12–104	3	0 46 40·08	76 57 15·41
8	+ 9–101	3	0 47 0·60	80 47 55·59
9	+10–105	5	0 48 2·91	79 28 47·68

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Reference Number of Star.	D.M.	Number of Obs.	Mean R.A. Jan. 1, 1889.	Mean N P.D. Jan. 1, 1889.
	°		h m s	° ′ ″
10	+12–108	4	0 49 12·00	77 45 14·94
11	+13–127	3	0 50 19·74	76 38 58·09
12	+11–118	2	0 50 40·48	77 53 14·85
13	+13–130	2	0 50 52·32	75 49 29·80
14	+ 9–110	3	0 50 59·24	80 35 5·00
15	+11–120	3	0 51 32·89	78 10 13·79
16	+12–119	4	0 52 5·06	76 54 15·67
17	+13–143	3	0 53 53·74	75 59 21·22
18	+10–115	2	0 55 25·64	79 25 0·55
19	+11–135	4	0 55 32·85	78 41 9·56
20	+13–150	4	0 56 43·55	76 20 41·99
21	+15–154	3	0 57 9·68	74 27 33·10
22	+12–126	2	0 57 16·42	77 32 49·69
23	+13–155	2	0 58 0·67	76 39 32·41
24	+14–163	6	0 59 13·77	75 39 4·30
25	+14–168	5	0 59 57·09	75 36 44·07
26	+15–159	2	1 0 29·70	74 16 49·22
27	+15–164	6	1 1 59·67	74 23 45·27
28	+16–116	3	1 2 2·15	73 10 49·31
29	+16–119	4	1 2 34·97	72 56 19·70
30	+14–175	4	1 4 18·25	74 55 1·03
31	+17–166	3	1 5 3·88	72 11 53·84
32	+16–123	3	1 5 10·32	73 48 47·94
33	+13–175	3	1 5 24·12	75 53 54·53
34	+15–175	3	1 6 55·81	73 49 31·44
35	+15–177	7	1 8 13·81	74 27 14·82
36	+16–129	6	1 10 15·81	72 57 7·28
37	+15–185	5	1 11 34·48	74 13 52·08
38	+17–183	8	1 12 26·08	72 0 28·74

Observations of Stars as Culminators.

D.M.	Number of Obs.	Mean R.A. Jan. 1, 1889.	Mean N P.D. Jan. 1, 1889.
+10–065	16	0 31 32·027	79 10 28·13
+15–106	16	0 37 4·282	73 56 36·79
+10–171	14	1 17 2·193	79 12 46·61
+16–154	14	1 22 25·994	73 29 43·95

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Observations of Comet a 1890 (*Brooks*), *made at the Royal Observatory, Greenwich.*

(*Communicated by the Astronomer Royal.*)

The observations were made with the East or Sheepshanks equatoreal, aperture 6·7 inches, by taking transits over two cross wires at right angles to each other, and each inclined 45° to the parallel of declination.

Comet a 1890 (*Brooks*).

1890.	Greenwich Mean Solar Time. d h m s	Observer.	☄ − ✱ R.A. m s	Corr. for Refraction. s	☄ − ✱ N.P.D. ′ ″	Corr. for Refraction. ″	No. of Comp.	Apparent R.A. h m s	Log. factor of Parallax.	Apparent N.P.D. ° ′ ″	Log. Factor of Parallax.	Comp. Star.
April	16 15 2 55	H.	−1 28·42	0·0	− 8 8·8	−0·4	3	21 9 19·40	9·5530	70 36 42·6	0·7605	*a*
	16 15 7 24	...	−0 45·25	0·0	+ 0 15·5	0·0	5	21 9 21·52	9·5496	70 36 39·4	0·7482	*b*
	29 13 17 7	L.	+0 40·25	0·0	− 8 34·1	−0·4	4	21 1 33·91	9·6132	61 32 31·8	0·7400	*c*
	13 39 41	...	+0 45·00	0·0	+11 17·9	+0·6	6	21 1 33·19	9·6022	61 32 6·7	0·7202	*d*
	13 53 17	...	+3 17·75	0·0	+ 4 19·9	+0·2	2	21 1 32·79	9·5922	61 31 34·4	0·7065	*e*
	13 53 17	...	+2 43·75	0·0	+10 48·4	+0·5	2	21 1 31·99	9·5922	61 31 35·8	0·7065	*f*
	30 13 24 12	H.	−0 20·59	0·0	+ 0 9·2	0·0	6	...	9·6122	...	0·7259	*g*
	13 37 52	...	+3 31·83	0·0	− 3 47·2	−0·2	2	21 0 39·22	9·6032	60 44 26·6	0·7108	*h*
	13 50 4	...	−3 28·33	0·0	+ 0 35·0	0·0	2	...	9·5964	...	0·7013	*i*
May	1 13 20 45	A. D.	+0 42·83	0·0	+ 0 4·5	0·0	6	...	9·6136	...	0·7185	*j*
	1 13 37 35	...	+1 34·33	0·0	+11 35·7	+0·4	3	20 59 31·33	9·6028	59 56 47·2	0·7008	*k*